STUDIES ON NEOTROPICAL CADDISFLIES XXVI: NEW SPECIES FROM ARGENTINA *(TRICHOPTERA).*

OLIVIER S. FLINT, JR. (1)

The Trichoptera, or caddisflies, is the largest order of insects that is wholly aquatic in its immature stages. Although, 1115 names have been proposed for species from the Neotropical Region, intensive collecting in any area inevitably produces many species previously unknown to science. More than 100 species have been described or recorded from Argentina, yet I have over 60 undescribed species in my possession. This lack of knowledge is even true of an area one would expect to be well known, such as the "Area Platense". Eleven species are presently known from this area, and I am here describing six more (one species has not yet been taken in the Area Platense, but will probably be found with more careful colleting). These six species are being described to make the names available for the proposed "Fauna y Flora Acuáticas del Area Platense"

In addition to the material in our collection **(USNM)**, I am including specimens from the Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" **(MACN)**, Florida State Collection of Arthropods,Gainesville, Florida **(FSCA)**, and Cornell University, Ithaca, New York **(CU)**. Whenever adequate paratypes are available, examples will be placed in the Museo Argentino de Ciencias Naturales and the Museo de la Universidad Nacional de La Plata. I express my gratitude to Sixto Coscarón, Ricardo A. Ronderos, Juan A. Schnack, and Manuel J. Viana for their indispensable support of my work in the field and museums of Argentina I especially thank Roberto Tomas Puleston, of La Plata, for taking us to his Estancia Delta, thereby permitting us to make valuable collections from the southern part of the Provincia de Buenos Aires.

Smicridea (Rhyacophylax) pampena, new species
(Figures 1 - 4)

This species is very similar to *Smicridea (R.) spinulosa* Flint, known from Entre Ríos, Corrientes and Misiones in Argentina. Although it may prove to be a southern subspecies of *spinulosa*, the best course seems to be to describe *pampeana* as a distinct species at this time. The only significant difference between the two species, other than range, is the total lack of spinules apically on the aedeagus in *pampeana*.

(1) Curator, Neuropteroids, Department of Entomology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.

Adult. - Length of forewing, 6 mm. Width of eye of male in dorsal aspect half that of interocular distance. Color stramineous (almost yellow in some males); forewing with dark markings over chord, and in a scalloped, subterminal band; female with a pale brown ground color. Male abdomen with anterolateral processes of fifth sternum equal in length to sternum; without internal reticulates sacs. Male genitalia: Ninth segment with anterolateral angle broadly rounded. Tenth tergum divided apicomesally; tergite in lateral aspect broad, tip rounded and produced dorsad; in dorsal aspect with tip angled slightly mesad. Clasper with basal segment long, slightly inflated apicad; apical segment bluntly pointed. Aedeaugus with basal section enlarged and angled to axis of stem which is long, straight and smooth; internal sclerite long, slender and slightly sinuate.

Material. - Holotype, ♂: Argentina, Pcia. Buenos Aires, Rio Sauce Grande, Sierra de la Ventana, 23-25 Feb. 1968, O.S. Flint, Jr. **USNM** Type 76458. Paratypes: Same data, 35 ♂ 25 ♀. Arroyo Azul, Azul, 26 Feb. 1968, O.S. Flint, Jr., 3♂ 1♀.

Smicridea (Rhyacophylax) coronata, new species
(Figures 5-10)

Although this species superficially appears identical to the preceeding, it is slightly smaller on the average, and the male is of a brighter yellow color. However, the aedeagus with its crown of small spines around the internal sclerite is diagnostic.

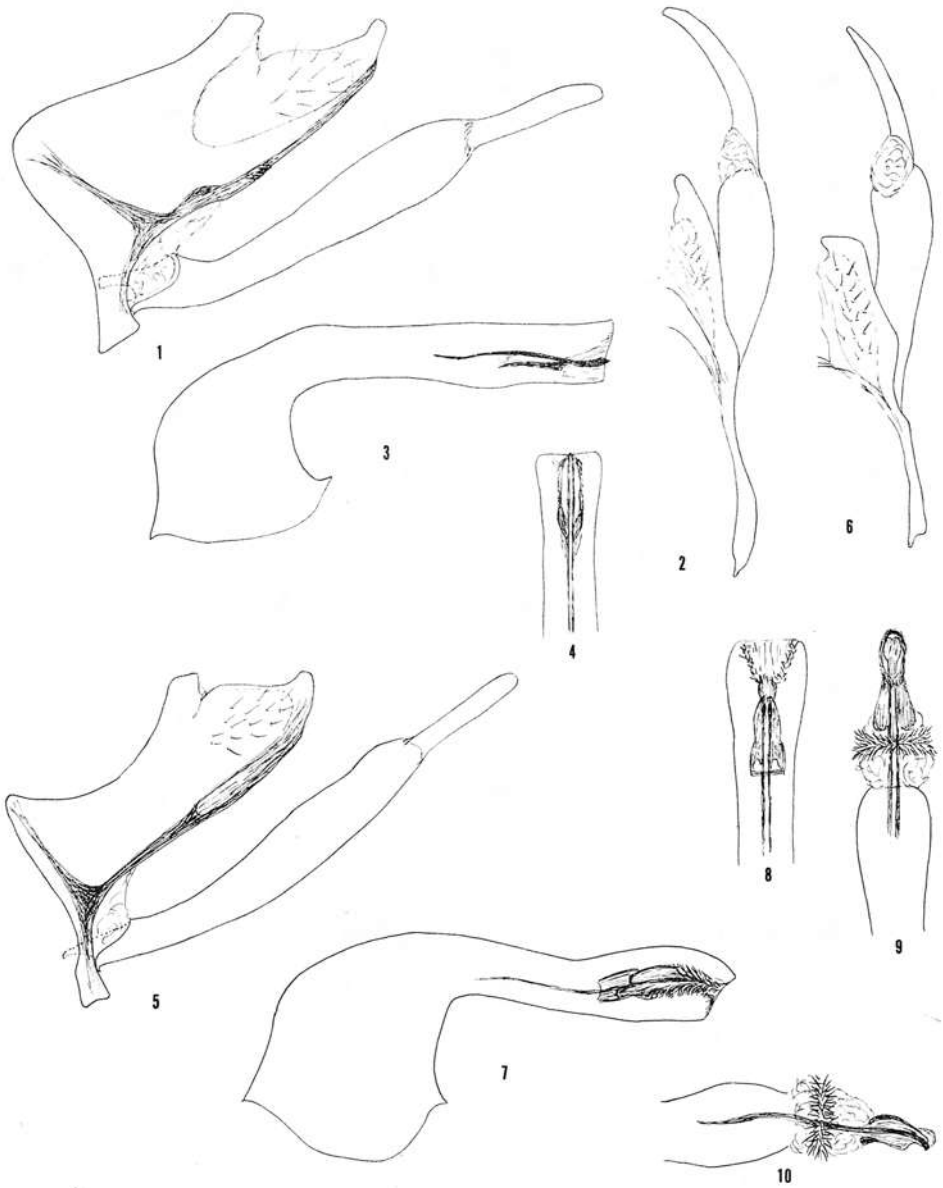
Adult. - Length of forewing, 5.5-6mm. Width of eye of male in dorsal aspect slightly more than half that of interocular distance. Color pale brownish-yellow; forewing with dark marks along chord, in a narrow, scalloped, subterminal band, and in spots in cells M and 3A; female with color browner. Male abdomen with anterolateral processes of fifth sternum as long as sternum; without internal reticulate sacs. Male genitalia: Ninth segment with anterolateral lobe narrow and slightly upturned. Tenth tergum divided apicomesally; tergite broad in lateral aspect with tip rounded and produced dorsad, in dorsal aspect with tip sharply angled mesad. Clasper with basal segment almost parallel-sided; apical segment bluntly pointed. Aedeagus with base enlarged and angled to axis of stem whose apex is convex dorsally with an elongate, eversible internal sclerite, surrounded by a ring of small spines.

Material.- Holotype, ♂: Argentina, Pcia. Cordoba, Villa Anizacate, 9-11 April 1967, L.E. Pena G. **USNM** Type 76459. Paratypes: Same data, 40♂ 90 ♀. Arroyo Tegua, 5-8 April 1967, L.E. Pena G., 1 ♂. La Paz (dept. San Javier), 15-31 Dic. 1928, C. Bruch, 1♂ 3♀ **(MACN)**; same, but 1-20 Jan. 1929, 1♂ 5♀ **(MACN)**. Alta Gracia, 2 feb. 1921, 1♂ **(MACN)**. Alta Gracia, La Granja, Sierras de Cordoba, 4 Jan. 1924, C. Bruch, 1♂ 1♀ **(MACN)**; same, but Nov. 1925, 1♂ 2♀ **(MACN)**; same, but Jan. 1925, 2♂ 1♀ **(MACN)**. *Pcia. Entre Rios,* Arroyo P. Verne, 4 km. north Villa San José, 15 Nov. 1973, O.S. Flint Jr., 7 ♂ 4♀. Salto Grande, Rio Uruguay, 16 Nov. 1973, O.S. Flint, Jr., 13♂ 9♀. *Pcia. Corrientes,* Yapeyú, 17 Nov. 1973, O.S. Flint, Jr., 3♂ 1♀. *Pcia. Misiones,* Arroyo Coati, 15 km. east San José, 18-19 Nov. 1973, O.S. Flint, Jr., 9♂ 6♀.

Paraguay, Dpto. Guaira, 3.9km. south Villarrica, 2 Dec. 1973, O.S. Flint, Jr., 2♂ 10♀. *BRASIL, Edo, Minas Geraes,* Vicosa, Oct.-Nov. 1929, E.J. Hambleton, 1♂ 3♀ **(CU)**.

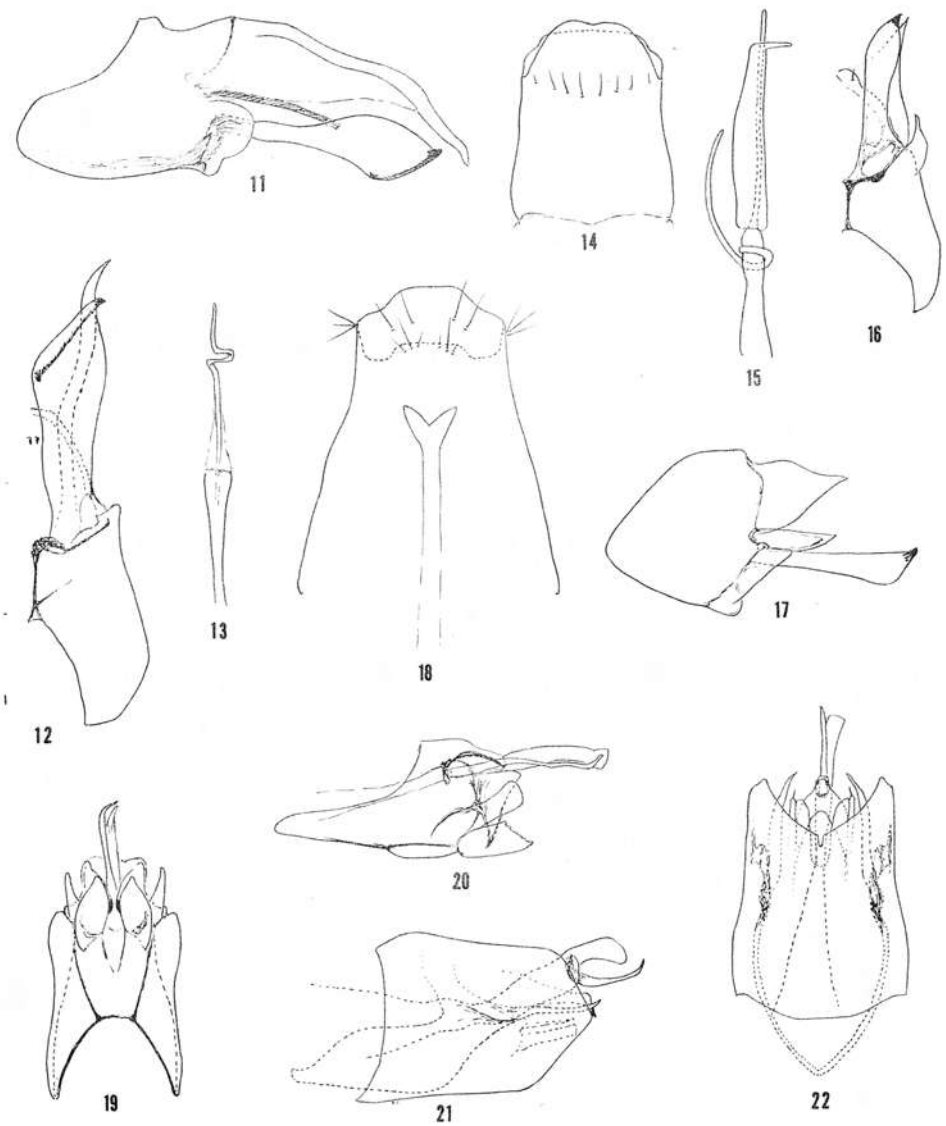
Hydroptila pulestoni, new species
(Figures 15-18)

This species is related to the Puerto Rican *H. martorelli* Flint, from whichit is distinguished by the structure of the claspers, most especially by the presence of only a single dark point apically in *pulestoni.*



Figs. 1-4, *Smicridea (R.) pampeana,* n.sp.: 1, male genitalia, lateral; 2, male genitalia, dorsal;3, aedeagus, lateral; 4, tip of aedeagus, dorsal.

Figs. 5-10, *Smicridea (R.) coronata,* n. sp.: 5, male genitalia, lateral; 6, male genitalia, dorsal; 7, aedeagus, lateral; 8, tip of aedeagus, dorsal; 9, tip of aedeagus, with internal sclerites everted, dorsal; 10, tip of aedeagus, with internal sclerites everted, lateral.



Figs. 11-14, *Hydroptila sauca*, n. sp.: 11, male genitalia, lateral; 12, male genitalia, ventral; 13, aedeagus, dorsal; 14, female eighth sternum, ventral. Figs. 15-18, *Hydroptila pulestoni*, n.sp.: 15, aedeagus dorsal; 16, male genitalia, ventral; 17, male genitalia, lateral; 18, female eighth sternum, ventral. Figs. 19-20, *Neotrichia tubulifera*, n. sp.: 19, male genitalia, ventral; 20, male genitalia, lateral. Figs. 21-22, *Oxyethira lagunita*, n. sp.: 21, male genitalia, lateral; 22, male genitalia, ventral.

Adult.- Length of forewing, 3-4 mm. Color pale brown; forewing with scattered, elongate, dark maculae, especially on costal margin. No sternal processes. Male genitalia: Ninth segment with anterior margin obtusely angled; with a posterolateral spur. Tenth tergum tapering to posterolateral points in both dorsal and lateral aspects. Subgenital plate with posterior margin sclerotized and angled mesad; with a pair of small apicomesal setae. Clasper long, straight, slightly widened apicad, with a single apicodorsal dark point. Aedeagus with portion beyond neck 1/3 total lenght; with a well-developed spiral process; apical portion tapering, ending in a short process at right angles to stem, with internal tubule projecting freely. Female genitalia: Eighth sternum elongate, with a midventral globet- shaped structure with a long stem and short, pointed apical arms; posterior margin produced ventrally, rounded, and with a few setae, dorsal margin not produced as much as ventral, but with a small mesal lobe.

Material.- Holotype ♂: Argentina, Pcia Buenos Aires, Estancia Delta, near Balneario Monte Hermoso, 11-15 Dec. 1973, O.S. Flint Jr., USNM Type 76460. Paratypes: Same data, 5♂ 4♀. Rio Sauce Grande, Sierra de la Ventana, 23-25 Feb. 1968, O.S. Flint, Jr., 9♂ 17♀. Chascomús (Between Lago Vitel and Lago Chascomús), 1 Oct. 1973, O.S. Flint, Jr., 1♂ metamorphotype. *Prov. Entre Rios,* Arroyo P. Verne, 4 km. north Villa San José, 15 Nov. 1973, O.S. Flint, Jr., 25♂ 103♀. *Pcia. Tucuman,* south of Concepción, 19 Feb. 1970, L.E. Pena G., 1♂ 3♀. *CHILE, Pcia. Curico,* El Coigo, 1 Mar. 1968, Flint & Pena, 1♂ 2♀. *Pcia.Ñuble,* Rio Chillan, near Recinto, 6 Mar. 1968, Flint & Pena, 1♂.

Hydroptila sauca, new species
(Figures 11-14)

Although this species is clearly a *Hydroptila,* it bears little resemblance to any othes species known to me. The long, strongly sclerotized lateral bands of th tenth tergum, the shape of the clasper, and the strange aedeagus are all distinctive.

Adult.- Length of forewing, 2.5mm. Color in alcohol, brown. Seventh sternum of male and female with a posteromesal pointed process. Male genitalia: Ninth segment with anterior margin produced ventrolaterally; without a posterolateral spur. Tenth tergum developed as a pair of long, slender, slightly twisted and pointed, lateral processes. Subgenital plate narrowly rounded; with a pair of small apicomesal setae. Clasper long, in lateral aspect with dorsal margin convex beyond midlength; apical margin slightly rolled laterad, produced into dorsal and ventral dark points (dorsal-most largest). Aedeagus with apical portion less than 1/3 total lenght; apex consisting of a sclerotized, free tubule that bears an almost 360° loop at midlenght. Female genitalia: Eighth segment unmarked ventrally, elongate; posterior margin almost equally convex both ventrally and dorsally, deeply emarginate laterally, with a transverse row of setae on venter.

Material.- Holotype ♂: Argentina, Pcia. Buenos Aires, Rio Sauce Grande, Sierra de la Ventana, 23-25 Feb. 1968, O.S. Flint, Jr., USNM Type 76461. Paratypes: Same data, 5♂ 3♀. *Pcia. Entre Rios,* Arroyo P. Verne, 4 km. north Villa San José, 15 Nov. 1973, O. S. Flint, Jr., 10♂ 14♂.

Neotrichia tubulifera, new species
(Figures 19-20)

This species would seem to be most closely related to the Brazilian *Neotrichia noteuna* (Mosely). The clasper of *tubulifera* are shorter and broader, tapering to the apex rather than being attenuate as in *noteuna.* The aedeagus of *tubulifera* bears a single long apical tubule rather than the 2 long,heavily sclerotized rods of *noteuna.*

Adult.- Length of forewing 2mm. Material in alcohol, uniformly brown. Abdomen without sternal processes. Male genitalia: Ninth segment with anterior margin bearing long lateroventral lobes; with a pair of ventral, submesal, sclerotized rods. Tenth tergum a membranous lobe. Bracteole elongate, indistinct, apex retanguloid. Subgenital plate with apex pointed, directed ventrad between clasper.Claspers elongate, broad in lateral aspect, tapering ventrad from midlength of dorsal margin, with apicodorsal margin rugose. Aedeagus with a tubular base; apparently (not clear in material available) with a spiral process at midlength; apical half with a long lateral tubule, whose tip is sharply angled, and a membranous central tube.

Material.- Holotype ♂: Argentina, Pcia. Entre Rios, Salto Grande, Rio Uruguay, 16 Nov. 1973, O.S. Flint, Jr., USNM Type 76462. Paratypes: Same data, 1♂ 55♀. *Pcia. Buenos Aires,* San Isidro, 11 Feb. 1969, Martínez & Woodruff, 5♂ 4♀ **(FSCA).**

Oxyethira lagunita, new species
(Figures 21-22)

This is a rather typical, but very distinctive, species of *Oxyethira* that may by most closely related to *O. macrosterna* Flint. It is distiguished by the long spine borne laterally from the ninth segment, the apicomesal beak-like projection of the subgenital plate, and single large spine of the aedeagus.

Adult.- Length of forewing, 2mm. Material completely cleared and decolored. No sternal processes; seventh sternum bearing a heavy apical brush of setae. Male genitalia: Eighth segment forming a tube enclosing genital capsule; posterior margin of sternum with a deep-V-shaped excision, tergum complete divided by a similar but deeper excision. Ninth segment with anteroventral margin produced into a rounded, scoop-like lobe; posterolateral angle produced into a long, pointed spine. Subgenital plate produced posteromesally into a decurved, beak-like lobe. Clasper elongate, parallel-sided, united basomesally; laterally a seta-tipped, rod-like process. Aedeagus tubular, inflated basally; apex with a large, curved spine.

Material.- Holotype ♂: Argentina, Pcia, Entre Rios, Arroyo P. Verne, 4 km. north Villa San José, 15 Nov. 1973, O.S. Flint, Jr., USNM Type 76463. Paratype: *Pcia. Buenos Aires,* Chascomús (between Lago Vitel and Lago Chascomús), 1 Oct. 1973, O.S. Flint , Jr., 1♂ metamorphotype.

SUMMARY: *Studies on Neotropical caddisflies, XXVI: New species from Argentina* (Trichoptera).

Six new species of Trichoptera are described from the Provincia de Buenos Aires and surrounding Provinces. Two species of the family Hydropsychidae, genus *Smicridea,* sugenus *Rhyacophylax,* are described and figured: *Smicridea (R.) pampeana* (Pcia. Buenos Aires), and *Smicridea (R.) coronata* (Pcias. Córdoba, Entre Ríos, Corrientes, Misiones, and Brasil and Paraguay). Four species of the caddisfly Hydroptilidae, the microcaddisflies, are described and figured: *Hydroptila pulestoni* (Pcias. Buenos Aires, Entre Ríos, Tucumán, and Chile), *Hydroptila sauca* (Pcias. Buenos Aires and Entre Ríos), *Neotrichia tubulifera* (Pcias. Entre Ríos and Buenos Aires), and *Oxyethira lagunita* (Pcias. Entre Ríos and Buenos Aires).

RESUMEN: *Estudios sobre Neotropicales. XXVI: Especies nuevas de Argentina* (Trichoptera).

Seis especies nuevas de Trichoptera de la provincia de Buenos Aires y otras vecinas se describen en este trabajo. Dos especies de la familia Hydropsychidae; género *Smicridea,* sugénero *Rhyacophylax Smicridea (R) pampeana* (Pcia, Buenos Aires) y *Smicridea (R.) coronata* (Pcias. Córdoba, Entre Ríos, Corrientes, Misiones y Brasil y Paraguay). Cuatro especies de la familia Hydroptilidae, los microtricópteros, *Hydroptila pulestoni* (Pcias. Buenos Aires, Entre Ríos, Tucumán y Chile), *Hydroptila sauca* (Pcias. Buenos Aires y Entre Ríos), *Neotrichia tubulifera* (Pcias. Entre Ríos y Buenos Aires), y *Oxyethira lagunita* (Pcias. Entre Ríos y Buenos Aires).